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ABSTRACT

This report, which covers fiscal years 1990 and 1991, is the fourth in a series summarizing the activities and accomplishments of the Educational Resources Information Center (ERIC) program, which is funded and managed by the Office of Educational Research and Improvement in the U.S. Department of Education. Highlights of the 2 years include a major systemwide effort to develop and promote publications addressing the six National Education Goals established by the President and the Governors; working with University Microfilms International (UMI) to develop and field-test two ERIC CD-ROM prototype products--the Compact ERIC and ERIC SchoolDisc--which contain the full text of hundreds of carefully selected documents and over 100 core education journals; a proposal to integrate ERIC with the educational databases produced in the other English-speaking countries, i.e., the British, Canadian, Australian, and New Zealand Education Indexes; and the participation of the ERIC Clearinghouse on Higher Education in the development of a worldwide bibliographic database on higher education by the International Association of Universities in Paris. This report includes a profile and an overview of the ERIC systems and reports on the ERIC clearinghouses, the ERIC Processing and Reference Facility, ACCESS ERIC, and the ERIC Document Reproduction Service, as well as examples of ERIC system initiatives during the year. Three tables and a statistical report are attached. (BBM)

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Office of Educational Research and Improvement
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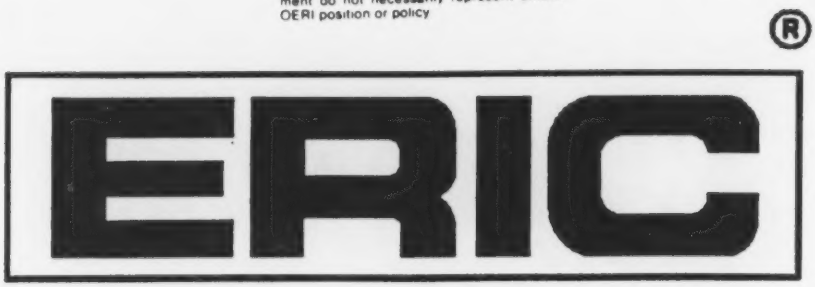

Annual Report - 1991

Summarizing the accomplishments of the Educational Resources Information Center

Prepared by:

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IR054184

U.S. Department of Education
Office of Educational Research and Improvement
Office of Research

November 1991

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Contents

A Profile of ERIC 1

The ERIC Clearinghouses 6

The ERIC Processing and Reference Facility 11

ACCESS ERIC 13

ERIC Document Reproduction Service (EDRS) 15

ERIC System Initiatives 16

- National Education Goals 16
- Full-Text ERIC Prototype 19
- ERIC International 19

A Profile of ERIC

The ERIC program is a national education information network involving the Federal government, university-based and private contractors, commercial publishing and database services, and libraries and information service providers throughout the world. This report provides answers to commonly asked questions about ERIC and describes accomplishments of the ERIC program during 1990 and 1991.

What is ERIC?

The Educational Resources Information Center (ERIC) is a national information network designed to provide users with ready access to education literature. Established in 1966 to make government-sponsored educational research available from a single source, ERIC now collects, analyzes, and distributes information from public and private, local, state, federal, and international sources.

Managed by the U.S. Department of Education's Office of Educational Research and Improvement (OERI), the ERIC system consists of 16 Clearinghouses, a small number of Adjunct Clearinghouses, and several system support components. These support components include the ERIC Processing and Reference Facility, ACCESS ERIC, the ERIC Document Reproduction Service, public and private publishers (for example, Oryx Press), and commercial information services. Federal funding for the ERIC program in Fiscal Years 1990 and 1991 was approximately $6.7 million in each year.

What are the functions of the ERIC components?

The ERIC program staff in the Department of Education's Office of Educational Research and Improvement plans systemwide activities, sets future directions, and makes program policy and budget determinations. The ERIC staff also monitors the work of the Clearinghouses, provides technical guidance, approves the development of new materials and services, and reviews and approves documents and products.

Located around the country, **ERIC Clearinghouses** are responsible for acquiring, processing, and disseminating information about a particular aspect or subject area of education, such as reading and communication skills, adult education, education management, technology, and higher education (see Table 3 for a complete list of Clearinghouses).

Associated with existing Clearinghouses, **Adjunct Clearinghouses** acquire, process, and disseminate information in specialized subject areas. They are funded from resources other than the ERIC program. Currently there are five Adjunct ERIC Clearinghouses. The Adjunct ERIC Clearinghouse on Literacy Education is affiliated with the Clearinghouse on Languages and Linguistics. The Adjunct ERIC Clearinghouses on Art Education and U.S.-Japan Studies are located at the Clearinghouse for Social Studies/Social Science Education. The Adjunct ERIC Clearinghouse on Consumer Education is operated by the Clearinghouse on Adult, Career, and Vocational Education. The Adjunct ERIC Clearinghouse on Chapter 1 is managed by an outside organization, but follows all ERIC standards for document processing.

In addition, the ERIC Clearinghouse on Social Studies is collaborating with the National Trust for Historical Preservation and the National Park Service (which maintains the National Register of Historic Places) to expand ERIC's coverage of educational materials relating to history and historic places. The Clearinghouse is working with the German Culture Ministry to obtain support for expanding coverage of European education.

The ERIC Processing and Reference Facility is the technical hub that processes documents for entry into the database and maintains quality control standards for the entire system. The Facility receives and edits the abstracts and annotations prepared by the Clearinghouses, prepares the magnetic tapes that contain the current and historical parts of the ERIC database, and performs systemwide reference and technical coordination functions.

ACCESS ERIC advertises, markets, and disseminates ERIC products and services and acts as a referral service between the system and its users. ACCESS ERIC also issues press releases, maintains mailing lists, produces systemwide brochures, directories, newsletters, and publishes *The ERIC Review*—a publication designed to make educational research more accessible to users. Several referral databases--Education-Related Information Centers, Calendar of Education-Related Conferences, ERIC Information Service Providers, and ERIC Digests Online--are now available to the public via online access.

The ERIC Document Reproduction Service (EDRS) produces and sells microfiche and paper copies of documents announced in *Resources in Education* (RIE). Back collections of ERIC documents, cumulative indexes, and other ERIC microfiche products are also available from EDRS.

A commercial publishing firm, **Oryx Press,** produces and markets *Current Index to Journals in Education* and the *Thesaurus of ERIC Descriptors.*

What is contained in the ERIC database?

The ERIC database—the largest education database in the world—now contains almost 730,000 records of documents and journal articles. Users can access the ERIC database via telephone line from their computer to an online information service, on Compact Disc-Read Only Memory (CD-ROM) system, or through print and microfiche indexes.

The ERIC database is a bibliographic database of citations and summaries of documents and journal articles. Documents are primarily unpublished or fugitive materials including research studies, program descriptions and evaluations, conference proceedings, curriculum materials, bibliographies, and other reports. In 1990, more than 13,000 documents were selected, cataloged, indexed, abstracted, and announced in ERIC's monthly abstract journal *Resources in Education* (RIE). Most documents announced in RIE are available in microfiche or paper copy.

ED327008 EA022727
By the Year 2000: First in the World
Report of the Federal Coordinating Council for Science, Engineering and Technology, Department of Energy, Washington, DC. 1991, 338p.
Available From: Superintendent of Documents, U.S. Government Printing Office, Washington, DC.
EDRS Price - MF01/PC14 Plus Postage.
Language: English
Document Type: Reports - Evaluative (142)
Geographic Source: U.S.; District of Columbia
Journal Announcement: RIEMAY91
Target Audience: Policymakers
President Bush's budget for FY 1992 includes $1.94 billion for mathematics, science and engineering eduction at the precollege through postdoctoral levels. This is an increase of $225 million or 13% over FY 1991. This report outlines the federal role in mathematics, science, and technology education at the precollege through graduate levels; examines the underlying issues that affect this role; and discusses the elements of a strategy that can maximize the effectiveness of the federal contribution in these fields. Specifically, this report defines the baseline of federal funding and programmatic activity, outlines strategic objectives and budget priorities....
Descriptors: Agency-coordination; Educational-Trends; Elementary-Secondary-Education; Federal-Government; Government-Publications; Government Role; Government-School-Relationship; Graduate-Study; Higher-Education; Postdoctoral-Education.

Sample Citation from ERIC Database

Similarly, ERIC announces current journal literature in a separate monthly publication titled *Current Index to Journals in Education* (CIJE). The journal citations contain short summaries of articles from nearly 800 education-related journals. In 1990, 18,032 new journal article citations were added to the ERIC database.

Where is ERIC?

Over 3,000 locations around the world receive ERIC materials on a regular basis. The United States Government Printing Office (GPO), which publishes RIE, has 1,250 domestic and international subscribers who receive the printed edition of RIE every month. GPO also sends 1,025 printed copies of RIE and 700 microfiche copies of CIJE to depository libraries throughout the United States; an additional 78 foreign institutions and libraries receive RIE from the Library of Congress as part of its international exchange program. Oryx Press, the publisher of CIJE, reports that in 1990 there were 1,614 subscriptions to CIJE, including 409 from foreign countries.

Most documents entered into the ERIC database are filmed and stored on microfiche. ERIC microfiche collections are found at many locations throughout the world, including locations in every state and in more than 60 countries; (see Tables 1 and 2). In addition to the microfiche collections, most of these locations also provide clients with ERIC database search services, either online or on CD-ROM.

For someone without easy access to an ERIC microfiche collection, reprints of ERIC documents can be ordered, in microfiche or paper copy, from the ERIC Document Reproduction Service (EDRS). Orders to EDRS can be placed by mail, by telephone (a toll-free number: 1-800-443-ERIC), by FAX (703-440-1408), or through online vendors (e.g., *Dialog and Orbit*). In 1990, EDRS responded to 12,200 "on-demand" orders for ERIC document reprints.

The journal articles cited in ERIC, however, present a different situation. Each journal is copyrighted by its own publisher. Users with access to public or university libraries (many of which provide public services) can usually obtain journal articles there or through inter-library loan. For people who do not have easy access to a library, reprints of nearly 90 percent of the journal articles cited in ERIC can be ordered from the University Microfilms International (UMI) Article Clearinghouse, in Ann Arbor, Michigan.

Who receives ERIC Clearinghouse services?

Since 1987, ERIC has committed itself to reaching more diverse audiences. Detailed information collected since 1988 indicates that ERIC Clearinghouses are indeed receiving requests for information from a wide spectrum of users. In addition to researchers and teachers, ERIC also reaches policy makers, journalists, and the general public.

During 1990, the ERIC Clearinghouses, the ERIC Processing and Reference Facility (the Facility), and ACCESS ERIC responded to over 100,000 requests for information. Government agencies (federal, state, local, and foreign) constituted about 8 percent of the total users, the elementary/secondary education sector comprised 33 percent of the total users, and postsecondary education accounted for 37 percent. Librarians, journalists, other professionals, parents, and the general public constituted the remaining 22 percent.

How much was the ERIC database used in 1990?

Since commercial information services must maintain detailed records for billing purposes, it is possible to get some information about ERIC users and the amount of online usage of the ERIC database. Colleges and universities represented the most frequent online ERIC users (about 40 percent of the searchers), followed by medical organizations and school districts. Also, a recent report (Tenopir, "Online Databases," **Library Journal**, April 1, 1991, pp. 96-98) indicated that out of more than 5,600 computer readable databases from over 850 vendors, ERIC was the third-most searched database in the country, the second-most searched database among academic libraries, and the most popular database used by public libraries in the United States and Canada. The report also indicated that ERIC is the most popular database on CD-ROM in public libraries and information centers, and the second-most popular database used in research, specialized, and university libraries. The popularity of ERIC in Europe has also grown considerably over the years. Today, ERIC is the fourth most popular optical media product in European libraries.

Total online search time:
90,000-120,000 hours
Number of online users:
110,000 in 90 countries
Number of searches:
500,000
Number of output records:
7.2 million citations
Total online user costs:
$2.8 million

Usage Chart—Source: Industry Newsletter and online vendors.

Online use of the ERIC database increased over 11 percent in 1990 (over 500,000 as compared with 1989 usage of about 450,000) despite the rapid growth in popularity of ERIC on CD-ROM. However, unlike ERIC online, it is impossible to accurately estimate usage figures for CD-ROM. During 1990, the subscriptions to ERIC on CD-ROM are estimated to be significantly higher than they were in 1989. Several thousand university, school and public libraries now have CD-ROM work stations dedicated to ERIC, which clients use on their own or with minimal assistance and without much recordkeeping.

The ERIC Clearinghouses

Each Clearinghouse is assigned a well-defined and unique scope of coverage. Clearinghouses perform four basic tasks: database building, outreach, publications development, and user services.

In carrying out these tasks, Clearinghouse staff acquire, evaluate, catalog, abstract and index documents and journal articles, produce and disseminate a variety of materials for diverse audiences, respond to a multitude of inquiries and information requests, and conduct training workshops at numerous professional conferences and meetings.

Clearinghouse Staffing

The Clearinghouse and Adjunct contracts supported a total of 106 full-time equivalent (FTE) staff. Almost 35,000 hours (or 19 FTEs) were contributed by the host institutions. Thus, the total number of full-time staff in 1990 for the ERIC program was about 125, an increase of 4 FTE over the level reported by the Clearinghouses in 1989.

Clearinghouse Funding

In Fiscal Years 1990 and 1991, OERI spent about $5.2 million, or 78 percent of ERIC's $6.7 million appropriation, on ERIC Clearinghouse contracts. Contract amounts for the 16 Clearinghouses ranged from $299,000 to $374,000. In addition to the $6.7 million appropriated in both fiscal years, ERIC received financial support to carry out special projects from two Offices in the Department of Education: the Office of Special Education and Rehabilitative Services (to develop a database of current-funded research projects), the Office of Vocational and Adult Education (to support the Adjunct ERIC Clearinghouse on Literacy Education), and from the National Endowment for the Arts (to help support the Adjunct ERIC Clearinghouse for Art Education).

ERIC Component	Staffing			Funding
	Contract Hours	Contributed Hours	Total Hrs.	Total ($ thousands)
Adult, Career & Voc Education	12,384	1,513	13,897	$ 374
Counseling & Personnel Services	16,763	5,730	22,492	314
Educational Management	13,053	4,643	17,696	299
Elementary/Early Childhood Ed	10,384	1,524	11,872	299
Handicapped/Gifted Children	14,100	38	14,137	320
Higher Education	12,058	6,331	18,389	365
Information Resources	12,712	1,934	14,646	324
Junior Colleges	12,081	2,166	14,247	299
Language and Linguistics	8,167	555	8,722	300
Reading & Comm Skills	17,451	4,542	21,993	373
Rural Education & Small Schools	7,099	774	7,872	305
Science, Math & Environmental Ed	11,613	2,072	13,685	330
Social Studies/ Social Science Ed	15,448	1,218	16,666	373
Teacher Education	9,390	240	9,600	310
Tests, Measurement & Evaluation	5,270	529	5,799	299
Urban Education	10,728	636	11,364	299
Adjunct on Literacy Education	7,491	0	7,491	264
Subtotal	196,124	34,444	230,568	
ERIC Facility	30,050	0	30,050	835
ACCESS ERIC	11,459	246	11,705	427
EDRS	NA	NA	NA	35
ERIC Printing	NA	NA	NA	60

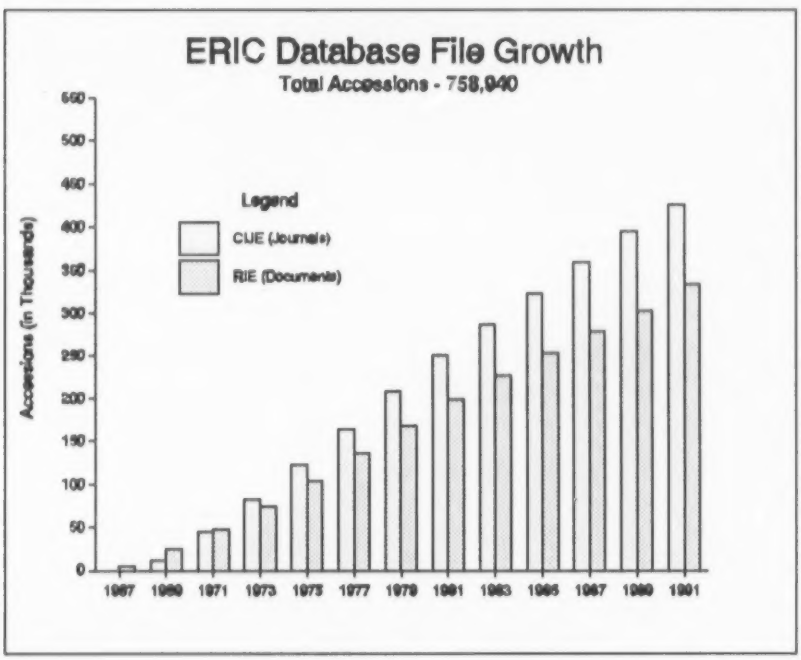
Funding for ERIC Clearinghouses came from FY 1990 and FY 1991.

Staffing and Funding of the ERIC system

Database Building

Database building activities include the acquisition, selection, processing, and announcement of education documents and journal articles in *Resources in Education* (RIE) and *Current Index to Journals in Education* (CIJE).

Resources in Education (RIE)—A monthly publication describing additions to the ERIC database, RIE contains abstracts of newly-acquired educational documents. In 1990, the Clearinghouses acquired over 20,000 new documents to review for possible selection for the ERIC database. Over 13,500 were solicited directly or through the nearly 1,900 acquisitions arrangements that ERIC has with associations and institutions worldwide, while nearly 6,500 (about one-third) were unsolicited.



The ERIC Clearinghouses exercise discretion in selecting the documents that will become part of the ERIC database. Each Clearinghouse follows systemwide selection criteria which include such characteristics as content relevance, objectivity, technical quality, timeliness, and reproducibility. The ERIC Clearinghouses rejected over 7,200 documents, or about 32 percent of the documents received in 1990, and selected 13,528 for processing into RIE. The final count of documents actually processed into RIE was 13,052, bringing the total number of ERIC documents, through 1990, to 315,230.

Current Index to Journals in Education (CIJE)—CIJE is a monthly publication containing the citations of newly-selected articles from educational journals. The Clearinghouses reviewed over 3,300 journal issues in 1990, from which 21,712 articles were selected for the ERIC database. The total number of journal articles actually processed and added to the database in 1990 was 18,032, bringing the total number of CIJE citations to 412,631.

Responding to a request from the library community, ERIC now indexes all journals in CIJE by their ISSN number. This innovation allows a computer search to be easily limited to a journal or a set of journals. (For monographs, ERIC has always cataloged the ISBN numbers when available.)

Vocabulary Development—Coupled with its mission to collect and index the important educational literature, ERIC also is charged with developing the definitive indexing vocabulary for education. This vocabulary is published by Oryx Press as the *Thesaurus of ERIC Descriptors*. The *Thesaurus* contains a controlled vocabulary of educational terms which reflect ERIC's 25 years of monitoring changes in the field of education and which are used to search the ERIC database efficiently and accurately. The *Thesaurus* is considered by the education community as the definitive guide to the vocabulary of education. The 12th edition of the *Thesaurus* was published by Oryx Press in mid-1990 and now contains nearly 10,000 terms.

The Identifier Authority List (IAL) serves as a companion volume to the *Thesaurus*. The IAL contains Identifiers, which are limited subject retrieval terms not found in the *Thesaurus*, such as institutional names or new, yet-to-be-established terminology.

Outreach Activities

During 1990, the Clearinghouses increased their efforts to reach new ERIC users. These activities included assessing user needs, linking with professional organizations and ERIC Partners, and developing products targeted for specific audiences. In 1990, Clearinghouse staff participated in nearly 600 conferences and meetings, making 343 presentations and sponsoring 100 exhibits.

ERIC Partners—During 1990, the Clearinghouses intensified their efforts to increase their contacts and relationships with organizations designated to be "ERIC Partners." ERIC Partners are defined as organizations that work with ERIC to help their constituents obtain pertinent education information. Partners agree to disseminate materials to their constituents and, if appropriate, to help acquire materials for the database. In 1990, there were over 500 Partners working with the ERIC Clearinghouses.

American Library Association
Center for Civic Education
Florida Dept. of Education
Literacy Volunteers of America, Inc.
Nat. Alliance of Black School Educators
National Governors' Association
Research for Better Schools
University of Toledo
William T. Grant Foundation

Examples of ERIC Partners

Publications and Targeted Products

The ERIC product lines reflect the types of information judged to be of use to ERIC's diverse audiences. The Digests, monographs, trends and issues papers, journal articles, and columns differ in their levels of comprehensiveness and complexity, as appropriate, in meeting the specific informational needs of different clients. A host of other Clearinghouse products designed to meet users' needs have also evolved: mini-bibliographies, pre-packaged computer searches on popular topics, flyers and brochures on Clearinghouse products and services, and special electronic bulletin boards that present abstracts of documents judged worthy of special recognition.

Last year, ERIC Clearinghouses produced 185 Digests, which are two-page analyses of recent research findings and information on major topics. Over 503,000 Digest copies were distributed by the Clearinghouses with an additional 158,642 distributed by secondary sources--all at no charge. This amount is a substantial increase in distribution over the previous years.

Clearinghouses produced 64 major publications, including research reviews and syntheses, monographs, state-of-the-art papers, and guides to the literature in the field. In addition, over 180 journal articles were published in 1990. The Clearinghouses also produced 178 shorter publications, such as annotated bibliographies and issues papers.

In summary, the Clearinghouses distributed 1,017,194 of their own products with an additional 522,995 distributed by secondary sources, such as ACCESS ERIC, for a total of 1,540,189 complimentary ERIC products--including Digests, newsletters, other publications, and brochures--distributed to the public.

User Services

Consistent with the mission of the Office of Educational Research and Improvement, ERIC's overall goal is to facilitate exchange between information producers and users to improve educational practice. To achieve this goal, ERIC provides extensive reference and retrieval services to the public; these services include literature searches, bibliographies, identification of popular documents, and referrals to other sources of information.

The Clearinghouses received over 97,200 inquiries last year—in the form of letters (63,801), visitors (8,625), and telephone and electronic mail (24,841). On the average, each Clearinghouse receives nearly 6,000 inquiries and visitors per year.

The ERIC Processing and Reference Facility

The ERIC Processing and Reference Facility (the "Facility") serves all components of the ERIC system. Its major responsibilities are:

- to update, expand, and maintain the ERIC database;
- to coordinate ERIC's document processing activities;
- to maintain technical quality control of the database, the authority lists, and the ERIC Thesaurus terms;
- to provide copies of the database and related publications in machine-readable form to public and private database vendors and publishers and to provide technical assistance on database functions; and
- to answer public inquiries and reference requests about the ERIC system and database.

Some of the more significant accomplishments of the ERIC Facility during 1990 were:

Reference and User Services

During 1990, the Facility responded to 1,819 reference inquiries, which required 3,523 individual documents.

Acquisitions

During 1990, the Facility acquired 5,036 education-related documents of which 4,011 were assigned to Clearinghouses for consideration for the database. This amount is over 30 percent of the total documents entering the ERIC database annually.

Editorial

During 1990, the Facility edited 13,052 document resumes for *Resources in Education* (RIE) and processed 18,032 journal article resumes for *Current Index to Journals in Education* (CIJE), for a grand total of 31,084 accessions added to the database. The overall database size through 1990 is 727,870 records.

Lexicography

The new 1990 edition of the *Thesaurus of ERIC Descriptors*, containing 282 new Descriptors, was published in August 1990. The *Thesaurus* file now includes 9,991 vocabulary terms, of which 5,575 are main-entry Descriptors and 4,416 are non-indexable USE references (synonyms). The Facility provided the updated the *Thesaurus* file on magnetic tape to Oryx Press for this edition.

The Facility evaluated 4,088 flagged Identifiers in the RIE input, adding 1,941 of these to the *Identifier Authority List* (IAL), and provided 7,493 indexing corrections to new or incoming RIE data, as well as 2,090 lexicographic corrections to the ERIC backfile.

All proposed new Descriptors are transmitted by the Lexicographer to the 28-member nationwide Vocabulary Review Group, which recommends the disposition of these new terms.

ERIC Clearinghouse Scope of Interest Guide

Much of 1990 was spent working with the ERIC Clearinghouses to revise, expand, and clarify their official scope of interest statements, and to resolve conflicts between Clearinghouses. This work was largely completed by the end of 1990. The revised *ERIC Clearinghouse Scope of Interest Guide* was published in early 1991.

Documents in Process Online File

Documents in process at the ERIC Clearinghouses that have not yet received an ED number are entered into a special file, entitled the Acquisitions Data Report (ADR) file, for duplicate checking purposes. During 1990, the Facility completed conversion of the ADR file to online status so that all Clearinghouses can now remotely interrogate a continually updated online file rather than wait for a printed list.

Royalties/Usage Fees for Use of ERIC Database

The Facility submitted a proposal in August 1990 for the charging of modest usage fees to vendors and to all those using the ERIC database in machine-readable form. If accepted and implemented, these funds would be used for various system improvement projects.

ACCESS ERIC

ACCESS ERIC coordinates ERIC's outreach and dissemination activities, develops new ERIC publications, and provides referral services. Since beginning its operations in May 1989, ACCESS ERIC has:

- produced 10 major publications, including directories of ERIC resources, an educational journal, pamphlets for parents, a variety of systemwide awareness products, and five new data files;
- responded to more than 8,000 requests from users (about 6,000 via the toll-free line--1-800-USE-ERIC); distributed more than 75,000 Conclusion Brochures; and mailed out over 35,000 copies of *The ERIC Review* (1,700 in one month alone).

Publications

- *A Pocket Guide to ERIC* briefly describes the ERIC system, its services and products, and their use; it includes a directory of ERIC Clearinghouses and support components, and online and CD-ROM vendors.
- *All About ERIC* is a more detailed look at the ERIC system than the *Pocket Guide* and describes ERIC products and services and how to use them; it also provides information on ERIC components and vendors.
- *The ERIC Review* is a new education journal issued three times a year; each issue covers "hot" topics in education and highlights publications and research findings produced by the U.S. Department of Education, the Office of Educational Research and Improvement, and the ERIC Clearinghouses.
- *The Catalog of ERIC Clearinghouse Publications* includes current prices of all available ERIC Clearinghouse and Component publications, such as Digests, bibliographies, monographs, and teaching guides.
- *ERIC Users' Interchange* is a periodical issued twice a year, which covers the technical side of using ERIC, reports systemwide news, and announces new publications.
- *The ERIC Conclusion Brochures* are pamphlets which synthesize and summarize significant findings of recent education research on topics of interest to parents and educators; titles in this series change throughout the year. Camera-ready art is available for mass reproduction.

Current titles include: "Why Don't Our Children Like Math?"; "How Can Elementary Science Education Be Improved?"; "How Can Parents Get More Out of School Meetings?"; "How Can We Keep Students in School?"; and "How Do I Help My Child Say "No" to Drugs?".

- *The ERIC Calendar of Education-Related Conferences* is an extensive list of upcoming national and regional conferences covering education topics; includes conference theme, geographic, subject, and sponsor indexes and provides contact persons and registration information.

- *The ERIC Directory of Education-Related Information Centers* identifies and describes resource centers and organizations that provide information relevant to education; includes subject, geographic, and master organizational indexes.

- *The Directory of ERIC Information Service Providers* identifies nearly 1,000 agencies and organizations throughout the world that provide individuals with computerized searches of the database, CD-ROM service, and ERIC microfiche collections and publications.

Data Files

- *ERIC Conference Calendar Database*: lists information on approximately 500 education conferences and meetings, including those the ERIC Clearinghouses plan to attend during the forthcoming year. Information retrieved through this database includes conference names, dates, registration specifics, and accommodation options.

- *ERIC Information Service Providers Database*: contains entries on nearly 1000 locations that provide access to ERIC reference tools, ERIC microfiche collections, and ERIC search services worldwide.

- *Education-Related Information Centers Database*: a guide to 300 organizations covering a broad range of education-related topics--from adult literacy to youth programs--that provide information syntheses, user services, technical assistance, information dissemination, and reference and referral services.

- *ERIC Training Opportunities and Products Database*: a listing of organizations that offer ERIC training and/or ERIC training products.

- *ERIC Partners*: a compilation of partnerships established by the ERIC Clearinghouses and ACCESS ERIC with other organizations on related issues. It provides information on the systematic outreach and networking activities between each Clearinghouse and its Partner organizations.

ERIC Document Reproduction Service (EDRS)

ERIC is known among large information systems for its incorporation of both archival and dissemination activities. As a component of this system, the ERIC Document Reproduction Service (EDRS) is responsible for reproducing the documents announced in ERIC's monthly abstract journal, *Resources in Education* (RIE).

EDRS manufactures and sells microfiche and paper copies of ERIC documents, produces microfiche for 874 Standing Order Customers (SOCs), creates over one million microfiche a month from the 1,100 titles added to the database, and provides on-demand microfiche and paper copies of RIE documents in response to orders received by telephone, FAX, mail, and online. Customers can place orders through three online ERIC database vendors--DIALOG Information Services, BRS Information Technologies and OCLC (Online Computer Library Center, Inc.). EDRS also provides a number of special microfiche collections and indexes to the ERIC database and offers customers a wide range of services.

The contract to operate the EDRS was recompeted in 1990 and in February 1991, the U.S. Department of Eduction awarded the contract to CBIS Federal, Inc., a wholly owned subsidiary of Cincinnati Bell, Inc., a family of companies serving three core areas-- telecommunications, information services, and marketing and telemarketing services. CBIS Federal is responsible for the sales, marketing, and distribution of ERIC documents. Additionally, CBIS Federal will explore and implement alternative technologies for the distribution of the full-text of ERIC documents.

CBIS Federal established a new EDRS facility in Springfield, Virginia. This state-of-the art, high volume, micrographics production facility also houses the EDRS customer service order fulfillment unit. ERIC customers may telephone or fax in their orders 24 hours a day, seven days per week. MasterCard or Visa is accepted and deposit accounts are also available. For customers who need to receive their orders quickly, EDRS provides an expedited document delivery service.

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or (703) 440-1400
FAX: (703) 440-1408

ERIC System Initiatives

National Education Goals

A major systemwide effort during 1990 and 1991 was to develop and promote publications addressing the six National Education Goals established by the President and the Governors. Examples include:

Readiness for School

- The Clearinghouse on Urban Education published *The Role of Parent Involvement in Children's Achievement*, which reviews the literature of various types of parent involvement and its impact on student learning.
- The Clearinghouse on Urban Education completed the issue paper *Involving Families of At-Risk Youth*, which was developed because most of the literature on parent involvement assumes schools are dealing with middle-class parents.
- The Clearinghouse on Reading and Communications Skills co-published with the International Reading Association *Your Child's Vision is Important*, which discusses how vision can affect how much and how well students read and learn.

High School Completion

- The ERIC Clearinghouse on Higher Education published *"High Risk" Students in Higher Education: Future Trends*, which discusses the nature of high-risk students, their impact on higher education institutions, teacher attitude and instructional styles toward these students, and some conclusions and implications to be drawn about high-risk students.
- The Clearinghouse on Urban Education published *Programs and Policies to Foster African American Male Achievement*, which represents a survey of public school programs developed to meet the special needs of black male students.
- The Clearinghouse on Adult, Career, and Vocational Education published the Digest *Helping At-Risk Youth Make the School-to-Work Transition*, which discusses the skills and attitudes youths need to find and keep employment, to maintain a meaningful adult lifestyle, and to develop positive social interactions.

Student Achievement and Citizenship

- The Clearinghouse for Social Studies/Social Science Education developed several new publications of high interest to educators in the field of history. One, *James Madison and the Federalist Papers*, is a collection of curriculum resources for high school history and civics teachers, which includes lessons plans, primary documents, annotated bibliographies, and background articles by scholars on the constitutional issues of the founding period. Another, *Citizenship for the 21st Century*, is a collection of scholarly papers by 17 leading researchers and curriculum developers in civic education. A third, *How to Teach the Bill of Rights*, is a guide to teaching about constitutional rights in schools, which includes lesson plans and an annotated bibliography.

- The Clearinghouse on Reading and Communication Skills published *Computers in English/Language Arts*, which is a compilation of lesson plans for incorporating computers in the English/Language Arts classrooms at both the elementary and secondary levels; a Digest on *Evaluating Student Writing: Methods and Measurement*, which reviews current research on methods and measurements for evaluating student writing.

- The Clearinghouse on Languages and Linguistics published a Digest on *Second Language Classroom Research*, which investigates important questions about the learning and teaching of foreign languages.

Science and Mathematics

- The Clearinghouse on Urban Education published *Teaching Mathematics with Understanding to Limited English Proficient Students*, which discusses effective ways of teaching elementary and higher level mathematics to non-native English speakers, and provides extensive examples of two teaching strategies.

- The Clearinghouse on Science, Mathematics, and Environmental Education produced two publications of promising and exemplary programs and materials for elementary and secondary schools--one for science and one for mathematics.

- The Clearinghouse on Rural Education and Small Schools published a Digest on *Experiential Learning of Mathematics: Using Manipulatives*, which examines research about the use of manipulatives to introduce or reinforce mathematical concepts.

Adult Literacy and Lifelong Learning

- The ERIC Clearinghouse on Tests, Measurement and Evaluation, in collaboration with the Association for Community-Based Education, produced *Measures for Adult Literacy Programs*, a candid evaluation of over 60 different assessment instruments that may be suitable for measuring adult literacy program outcomes.

- The Clearinghouse on Reading and Communications Skills published *Adult Literacies: Context and Challenges*, which presents the history, emerging definitions of adult literacy, scholarship and practice of adult literacy, and the challenges confronting adult literacy in the United States.

- The Adjunct Clearinghouse on Literacy Education published the Digest *Using the Newspapers in the ESL Literacy Classroom*, which uses this inexpensive and useful tool to introduce LEP students to cultural and linguistics concepts.

- The Clearinghouse on Adult, Career, and Vocational Education published the Digest on *Jobs in the Future*, which discusses the incompatibility between the type of work available in the 1990's and the kind of labor force available to do the work, and the strategies for meeting these shortcomings.

Safe, Disciplined and Drug-Free Schools

- The ERIC Clearinghouse on Educational Management published a Digest on *School Security*, which discusses preventive and coping strategies that include techniques to obtain and analyze data in order to identify trends and to develop a school security needs assessment; a Digest on *Gangs*, that discusses the increase in gang violence and strategies to counteract gang activities; and a publication on *Drug Testing*, which discusses the pressure on school administrators to adopt urgent measures to keep drugs and alcohol from further endangering our youth's well-being and undermining staff performance.

- The Clearinghouse on Urban Education published a Digest on *Teenage Pregnancy and Drug Abuse: Sources of Problem Behaviors*, which discusses drug and alcohol abuse and teenage pregnancy as two behaviors of at-risk children that are both a cause and a result of their lack of success in school.

Full-Text ERIC Prototype

For the past two years, ERIC has been working with University Microfilms International (UMI) to develop and to field-test ERIC CD-ROM prototype products. The **Compact ERIC** and the **ERIC SchoolDisc** are CD-ROM products which contain the full text of hundreds of carefully selected documents and over 100 core education journals, cover-to-cover. A working prototype has been field-tested at eight sites around the country.

ERIC International

ERIC has recently proposed integrating the ERIC database with those educational databases produced in the other English-speaking nations, including British, Canadian, Australian and New Zealand Education Indexes. The idea has met with considerable enthusiasm from the other database producers and was discussed at the annual meeting (October 1991) of the American Society for Information Science held in Washington, D.C.

Also, the ERIC Clearinghouse on Higher Education has been working with the International Association of Universities in Paris to develop a worldwide bibliographic database on higher education.

Tables 1 and 2

ERIC Service Providers--Around the World

ERIC Microfiche Collections

Statistical Report

January - December 1990

Table 3

List of ERIC Clearinghouses

ERIC Service Providers

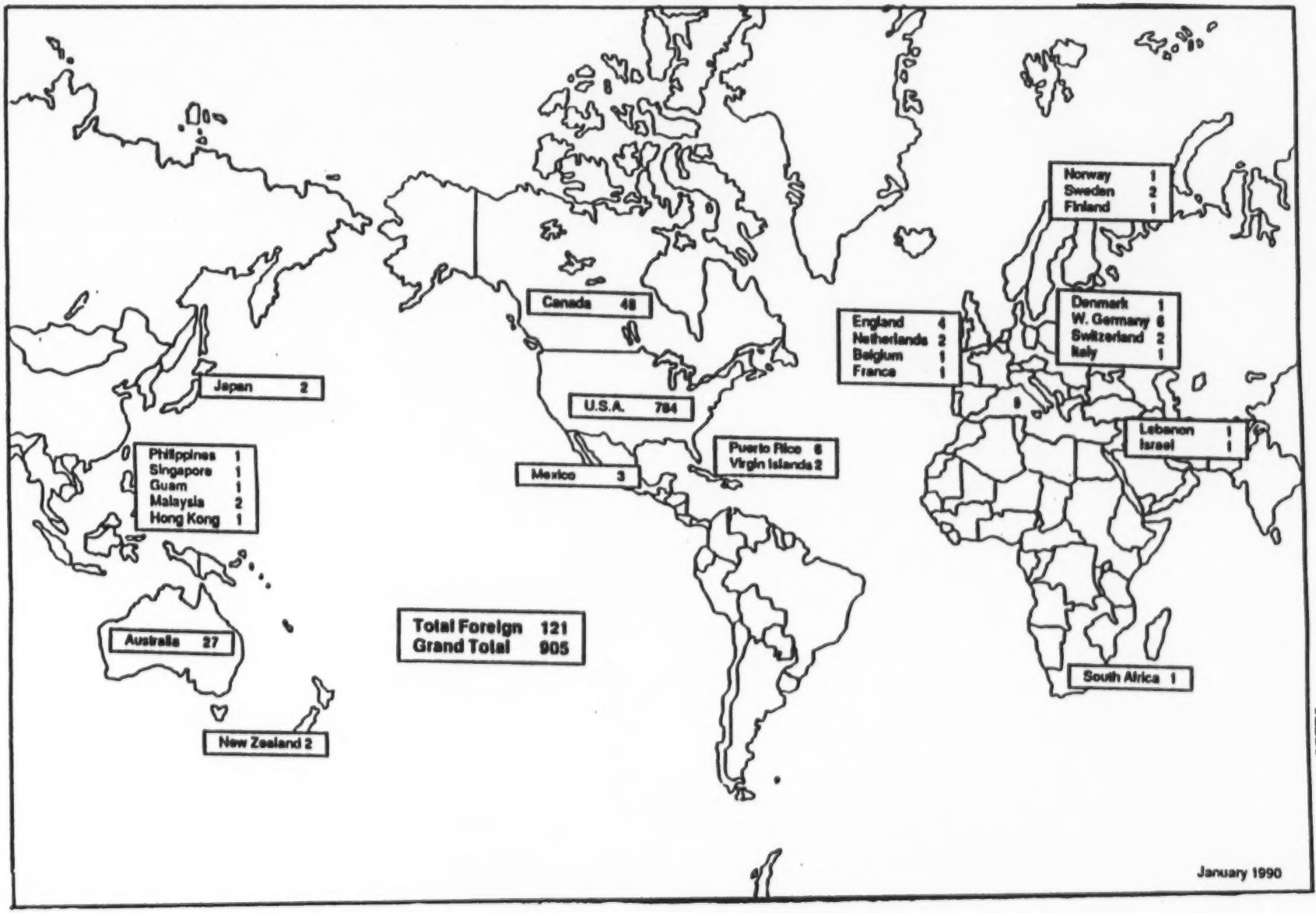

Table 1

ERIC Microfiche Collections
(Geographic Distribution - U.S.)

October 25, 1991 - 876 Customers

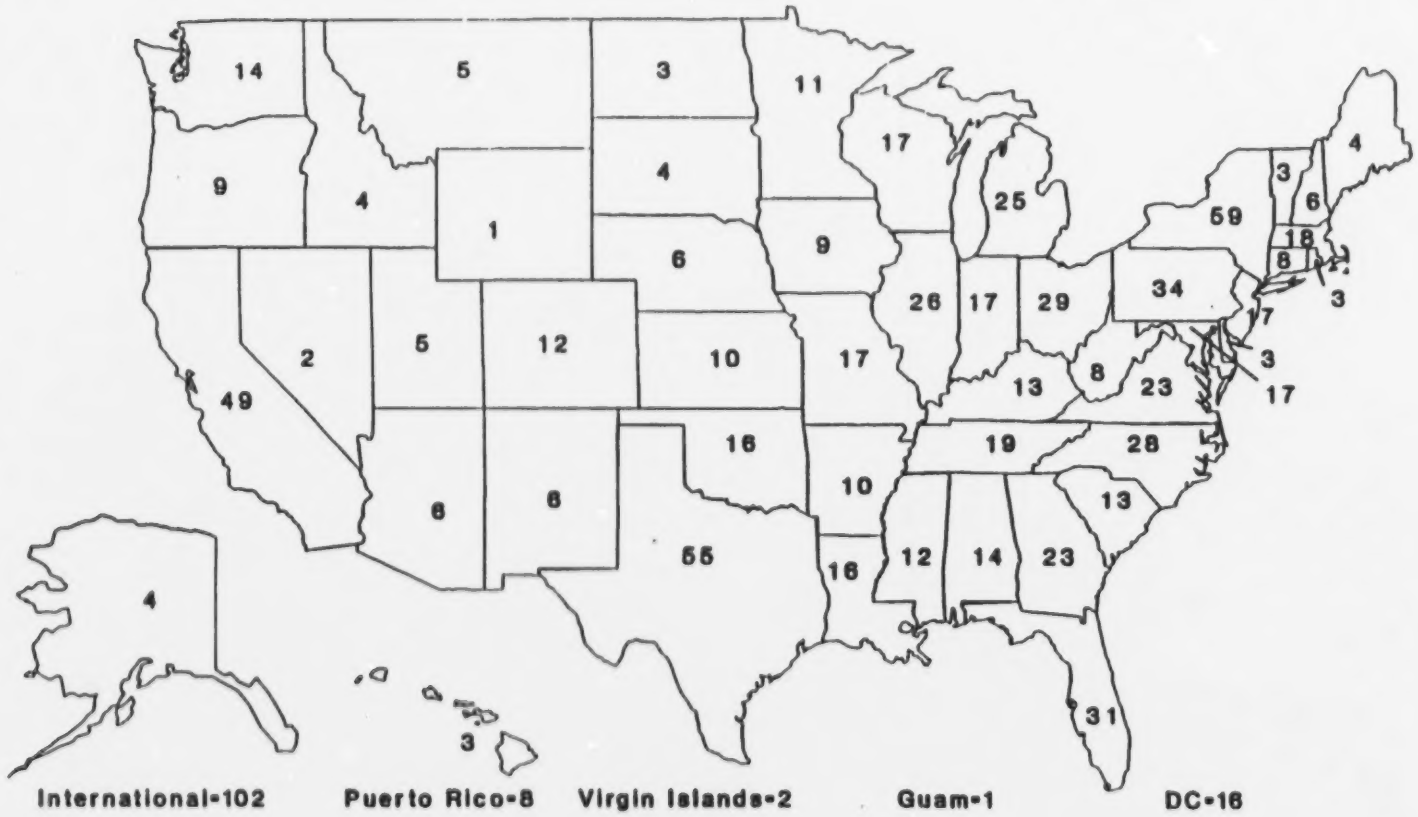

Table 2

STATISTICAL REPORT OF ERIC CLEARINGHOUSES

EDUCATIONAL RESOURCES INFORMATION CENTER

January - December 1990

STAFF	Staff Hours charged to the contract	196,124
	Staff Hours contributed by the host institutions	34,444
	TOTAL Hours of Effort	230,568
ACQUISITIONS and DATABASE BUILDING	Documents requested by title	46,110
	New acquisitions arrangements	199
	Documents received—solicited	13,565
	Documents received—unsolicited	6,477
	Documents received—transferred in	5,004
	TOTAL Documents Received	25,046
	Rejection rate	32%
	Journal issues processed—comprehensively	492
	Journal issues processed—selectively	2,701
	Journal issues processed—one-shot	173
	TOTAL Journal Issues Processed	3,366
LEXICOGRAPHY	New Descriptors submitted	67
	Changes recommended to current descriptors	14
	New or Current Descriptors Reviewed	231
REQUESTS	Letter inquiries	63,801
	Telephone inquiries	24,109
	E-Mail inquiries	732
	Clearinghouse visitors	8,625
	TOTAL Inquiries/Visitors	97,267
	Searches completed	6,468
OUTREACH and TRAINING	Meeting/Conferences/Workshops	584
	Meeting presentations	343
	Meeting exhibits	100
	Developed conference materials	458
USERS	Elementary/Secondary teachers	13,126
	Elementary/Secondary administrators	8,561
	Elementary/Secondary librarians	2,921
	Elementary/Secondary students	664
	Elem/Sec LEA's, school boards, etc.	3,780
	TOTAL for Elementary/Secondary	29,052
	Postsecondary professors/researchers	15,208
	Postsecondary administrators	5,511
	Postsecondary librarians	7,245
	Postsecondary students	6,645
	TOTAL for Postsecondary	34,609

STATISTICAL REPORT (continued)

	Government agencies—federal	1,162
	Government agencies—state	2,393
	Government agencies—local	1,284
	Government agencies—foreign	875
	TOTAL for Government Agencies	5,714
	Other librarians	2,411
	Journalists	598
	Other professionals	10,942
	Parents	3,337
	General public	4,067
	TOTAL Other Users	21,357
	TOTAL Users	90,732
PUBLISHING	Newsletters	25
	Journal columns	184
	Journal articles	93
	ERIC Digests	185
	Major Clearinghouse publications	64
	Other Clearinghouse publications	178
DISTRIBUTION by Clearinghouse or Host Organization	ERIC Digests	503,052
	Newsletters	160,081
	Major Clearinghouse publications	88,020
	Other Clearinghouse publications	221,330
	ERIC Systemwide Brochures	44,711
	TOTAL Sold	1,017,194
Secondary DISTRIBUTION	ERIC Digests	158,642
	Newsletters	14,007
	Major Clearinghouse publications	66,379
	Other Clearinghouse publications	272,679
	ERIC systemwide brochures	12,288
	TOTAL	522,995

ERIC Ready Reference # 6
Revised September 1991

ERIC CLEARINGHOUSES *(and Other Network Components)*

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the database, and also for providing information analysis products and various user services based on the database.

The exact number of Clearinghouses has fluctuated over time in response to the shifting needs of the educational community. There are currently 16 Clearinghouses. These are listed below, together with full addresses, telephone numbers, and brief scope notes describing the areas they cover.

ERIC Clearinghouse on *Adult, Career, and Vocational Education* (CE)
Ohio State University
Center on Education and Training for Employment
1900 Kenny Road
Columbus, Ohio 43210-1090
Telephone: (614) 292-4353:
(800) 848-4815 Fax: (614) 292-1260

All levels of adult and continuing education from basic literacy training through professional skill upgrading. The focus is upon factors contributing to the purposeful learning of adults in a variety of life situations usually related to adult roles (e.g., occupation, family, leisure time, citizenship, organizational relationships, retirement, and so forth).

ERIC Clearinghouse on *Counseling and Personnel Services* (CG)
University of Michigan
School of Education, Room 2108
610 East University Street
Ann Arbor, Michigan 48109-1259
Telephone: (313) 764-9492 Fax: (313) 747-2425

Preparation, practice, and supervision of counselors at all educational levels and in all settings. Theoretical development of counseling and guidance, including the nature of relevant human characteristics. Use and results of personnel practices and procedures. Group process (counseling, therapy, dynamics) and case work.

ERIC Clearinghouse on *Educational Management* (EA)
University of Oregon
1787 Agate Street
Eugene, Oregon 97403-5207
Telephone: (503) 346-5043 Fax: (503) 346-5890

All aspects of the governance, leadership, administration, and structure of public and private educational organizations at the elementary and secondary levels, including the provision of physical facilities for their operation.

ERIC Clearinghouse on *Elementary and Early Childhood Education* (PS)
University of Illinois
College of Education
805 W. Pennsylvania Avenue
Urbana, Illinois 61801-4897
Telephone: (217) 333-1386 Fax: (217) 333-3767

All aspects of the physical, cognitive, social, emotional, educational, and cultural development of children, from birth through early adolescence. Among the topics covered are: prenatal and infant development and care; parent education; home and school relationships; learning theory research and practice related to children's development; preparation of early childhood teachers and caregivers; and educational programs and community services for children.

ERIC Clearinghouse on *Handicapped and Gifted Children* (EC)
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091-1589
Telephone: (703) 264-9474 Fax: (703) 264-9494

All aspects of the education and development of persons (of all ages) who have disabilities or who are gifted, including the delivery of all types of education-related services to these groups. Includes prevention, identification and assessment, intervention, and enrichment for these groups, in both regular and special education settings.

ERIC Clearinghouse on *Higher Education* (HE)
George Washington University
One Dupont Circle, N.W., Suite 630
Washington, D.C. 20036-1183
Telephone: (202) 296-2597 Fax: (202) 296-8379

All aspects of the conditions, programs, and problems at colleges and universities providing higher education (i.e., four-year degrees and beyond). This includes: governance and management; planning; finance; inter-institutional arrangements; business or industry programs leading to a degree; institutional research at the college/university level; Federal programs; legal issues and legislation; professional education (e.g., medicine, law, etc.) and professional continuing education.

ERIC Clearinghouse on *Information Resources* (IR)
Syracuse University
Huntington Hall, Room 030
800 University Avenue
Syracuse, New York 13244-2340
Telephone: (315) 443-3640 Fax: (315) 443-5732

Educational technology and library/information science at all academic levels and with all populations, including the preparation of professionals. The media and devices of educational communication, as they pertain to teaching and learning (in both conventional and distance education settings). The operation and management of libraries and information services. All aspects of information management and information technology related to education.

ERIC Clearinghouse for *Junior Colleges* (JC)
University of California at Los Angeles (UCLA)
Math-Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, California 90024-1564
Telephone: (213) 825-3931 Fax: (213) 206-8095

Development, administration, and evaluation of two-year public and private community and junior colleges, technical institutes, and two-year branch university campuses. Two-year college students, faculty, staff, curricula, programs, support services, libraries, and community services. Linkages between two-year colleges and business/industrial/community organizations. Articulation of two-year colleges with secondary and four-year postsecondary institutions.

ERIC Clearinghouse on *Languages and Linguistics* (FL)
Center for Applied Linguistics
1118 22nd Street, N.W.
Washington, D.C. 20037-0037
Telephone: (202) 429-9551 Fax: (202) 429-9766

Languages and language sciences. All aspects of second language instruction and learning in all commonly and uncommonly taught languages, including English as a second language. Bilingualism and bilingual education. Cultural education in the context of second language learning, including intercultural communication, study abroad, and international educational exchange. All areas of linguistics, including theoretical and applied linguistics, sociolinguistics, and psycholinguistics.

ERIC Clearinghouse on *Reading and Communication Skills* (CS)
Indiana University, Smith Research Center
2805 East 10th Street, Suite 150
Bloomington, Indiana 47408-2698
Telephone: (812) 855-5847 Fax: (812) 855-7901

Reading and writing, English (as a first language), and communications skills (verbal and nonverbal), kindergarten through college. Includes family or intergenerational literacy. Research and instructional development in reading, writing, speaking, and listening. Identification, diagnosis, and remediation of reading problems. Speech communication (including forensics), mass communication (including journalism), interpersonal and small group interaction, oral interpretation, rhetorical and communication theory, and theater/drama. Preparation of instructional staff and related personnel in all the above areas.

ERIC Clearinghouse on *Rural Education and Small Schools* (RC)
Appalachia Educational Laboratory
1031 Quarrier Street
P.O. Box 1348
Charleston, West Virginia 25325-1348
Telephone: (800) 624-9120 (Outside WV)
(800) 344-6646 (In WV) Fax: (304) 347-0487

Curriculum and instructional programs and research/evaluation efforts that address the education of students in rural schools or districts, small schools wherever located, and schools or districts wherever located that serve American Indian and Alaskan natives, Mexican Americans, and migrants, or that have programs related to outdoor education. Includes the cultural, ethnic, linguistic, economic, and social conditions that affect these educational institutions and groups. Preparation programs, including related services, that train education professionals to work in such contexts.

ERIC Clearinghouse for *Science, Mathematics, and Environmental Education* (SE)
Ohio State University
1200 Chambers Road, Room 310
Columbus, Ohio 43212-1792
Telephone: (614) 292-6717 Fax: (614) 292-0263

Science, mathematics, engineering/technology, and environmental education at all levels. The following topics when focused on any of the above broad scope areas: applications of learning theory; curriculum and instructional materials; teachers and teacher education; educational programs and projects; research and evaluative studies; applications of educational technology and media.

ERIC Clearinghouse for *Social Studies/Social Science Education* (SO)
Indiana University
Social Studies Development Center
2805 East 10th Street, Suite 120
Bloomington, Indiana 47408-2698
Telephone: (812) 855-3838 Fax: (812) 855-7901

All aspects of Social Studies and Social Science Education, including values education (and the social aspects of environmental education and sex education), international education, comparative education, and cross-cultural studies in all subject areas (K-12). Ethnic heritage, gender equity, aging, and social bias/discrimination topics. Also covered are music, art, and architecture as related to the fine arts.

ERIC Clearinghouse on *Teacher Education* (SP)
American Association of Colleges for Teacher Education (AACTE)
One Dupont Circle, N.W., Suite 610
Washington, D.C. 20036-1186
Telephone: (202) 293-2450 Fax: (202) 457-8095

School personnel at all levels. Teacher recruitment, selection, licensing, certification, training, preservice and inservice preparation, evaluation, retention, and retirement. The theory, philosophy, and practice of teaching. Organization, administration, finance, and legal issues relating to teacher education programs and institutions. All aspects of health, physical, recreation, and dance education.

ERIC Clearinghouse on *Tests, Measurement, and Evaluation* (TM)
American Institutes for Research (AIR)
Washington Research Center
3333 K St., N.W.
Washington, DC 20007-3541
Telephone: (202) 342-5060 Fax: (202) 342-5033

All aspects of tests and other measurement devices. The design and methodology of research, measurement, and evaluation. The evaluation of programs and projects. The application of tests, measurement, and evaluation devices/instrumentation in educational projects and programs.

ERIC Clearinghouse on *Urban Education* (UD)
Teachers College, Columbia University
Institute for Urban and Minority Education
Main Hall, Room 300, Box 40
525 W. 120th Street
New York, New York 10027-9998
Telephone: (212) 678-3433 Fax: (212) 678-4048

The educational characteristics and experiences of the diverse racial, ethnic, social class, and linguistic populations in urban (and suburban) schools. Curriculum and instruction of students from these populations and the organization of their schools. The relationship of urban schools to their communities. The social and economic conditions that affect the education of urban populations, with particular attention to factors that place urban students at risk educationally, and ways that public and private sector policies can improve these conditions.

Educational Resources Information Center (Central ERIC)
U.S. Department of Education
Office of Educational Research and Improvement (OERI)
555 New Jersey Ave., N.W.
Washington, D.C. 20208-5720
Telephone: (202) 219-2289 Fax: (202) 219-1817

ERIC Processing & Reference Facility
ARC Professional Services Group
Information Systems Division
2440 Research Boulevard, Suite 400
Rockville, Maryland 20850-3238
Telephone: (301) 258-5500 Fax: (301) 948-3695

ERIC Document Reproduction Service (EDRS)
Cincinnati Bell Information Systems (CBIS) Federal
7420 Fullerton Road, Suite 110
Springfield, Virginia 22153-2852
Telephone: (703) 440-1400
(800) 443-ERIC Fax: (703) 440-1408

Oryx Press
4041 North Central Avenue at Indian School, Suite 700
Phoenix, Arizona 85012-3397
Telephone: (602) 265-2651
(800) 279-6799 Fax: (602) 265-6250

ACCESS ERIC
Aspen Systems Corporation
1600 Research Boulevard
Rockville, Maryland 20850-3166
Telephone: (301) 251-5045
(800) 873-3742 Fax: (301) 251-5212